

itl boulder
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

NVLAP
NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL88305-GONIOPHOTOMETRY

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ISSUE DATE: 09/27/16

PREPARED FOR: B-K LIGHTING, INC.

CATALOG NUMBER: MA-LED-x45/x45-FL/FL-12-C

LUMINAIRE: MACHINED BLACK PAINTED METAL WALL MOUNTING BRACKET AND HOUSING

WITH 2 DISTINCT OPTICAL COMPARTMENTS, EACH OPTICAL COMPARTMENT
CONSISTS OF: DIFFUSE METAL CIRCUIT BOARD MOUNTING BASE, 1 CIRCUIT
BOARD WITH 1 LED, MOLDED WHITE PLASTIC LED
SURROUND/REFLECTOR MOUNTING BASE, MOLDED
MULTI-FACETED TIERED WHITE PLASTIC
REFLECTOR WITH TEXTURED SEMI-SPECULAR
FINISH, CLEAR MICRO-PRISMATIC FLAT GLASS
LENS IN MACHINED BLACK PAINTED CYLINDRICAL
METAL FRAME WITH UNFINISHED INTERIOR.
LENS PRISMS OUT.

LAMPS: TWO WHITE MULTI-CHIP LIGHT EMITTING
DIODES (LEDs), 1 VERTICAL BASE-UP
POSITION, 1 VERTICAL BASE-DOWN POSITION.

INPUT ELECTRICAL: 120.0 VOLTS, 68.6 WATTS,
0.576 AMPS

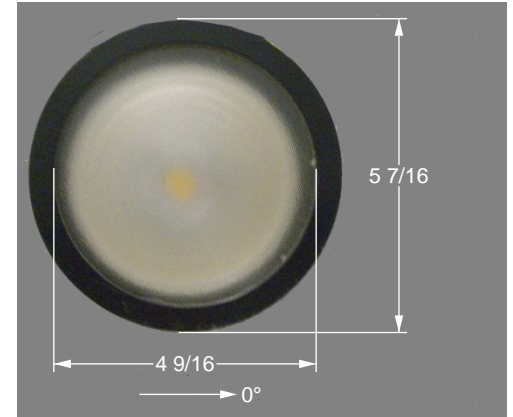
MOUNTING: WALL

LED DRIVERS: TWO ELDOLED ECODRIVE 561/S, DRIVERS
HAVE MULTIPLE LEADS, ONLY LINE INPUT AND
LED OUTPUT LEADS CONNECTED FOR THIS TEST.
CLIENT STATES EACH DRIVER PROGRAMMED FOR
1050mA OUTPUT.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE
PROVIDED AT RATED INPUT VOLTAGE
(120VAC, 60Hz) TO THE DRIVERS.

TEST PROCEDURE: IESNA LM-79-08

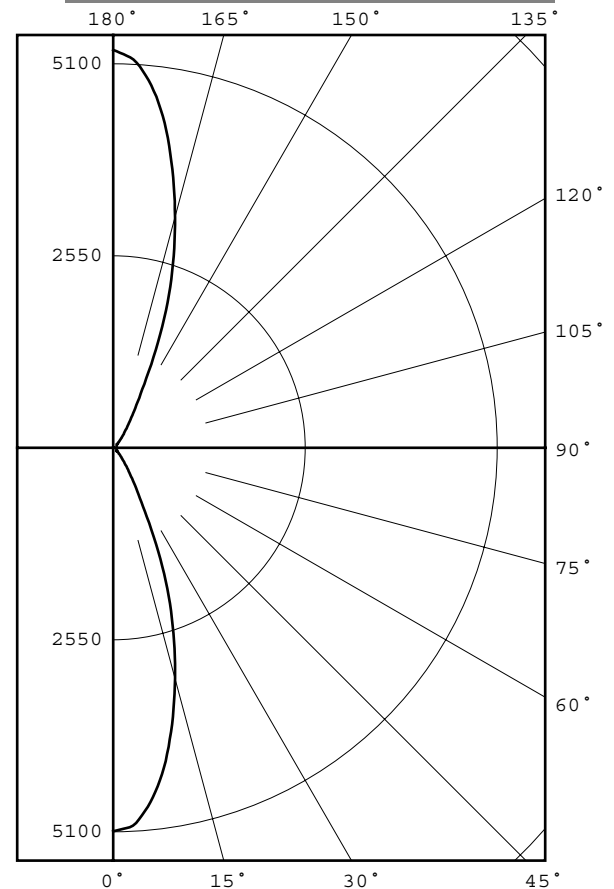
TEST DISTANCE = 20.0 FEET



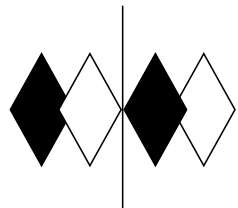
DEG	CANDELA	LUMENS
0	5093	
5	4843	439
15	3175	871
25	1201	569
35	313	207
45	103	84
55	40	37
65	19	19
75	8	9
85	1	2
90	0	
95	1	2
105	8	9
115	19	19
125	41	37
135	98	80
145	293	192
155	1117	538
165	3173	870
175	4962	449
180	5285	

ZONAL LUMEN	SUMMARY	
ZONE	LUMENS	%FIXT
0- 30	1879	42.4
0- 40	2087	47.1
0- 60	2208	49.8
0- 90	2238	50.5
90-120	30	0.7
90-130	67	1.5
90-150	339	7.7
90-180	2196	49.5
0-180	4434	100.0

EFFICACY = 64.6 lm/W
CIE TYPE - GENERAL DIFFUSE
LUMINAIRE SPACING CRITERION = 0.59
BEAM ANGLE (50%) : 35.3 DEGREES
FIELD ANGLE (10%) : 60.1 DEGREES



Checked J. VILLANUEVA
Approved R. BEATTIE
Lighting Engineer



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LUMINOUS DIAMETER: 4.562

LUMINANCE DATA IN CANDELA/SQ M

ANGLE AVERAGE

IN DEG

45	13810.
55	6612.
65	4262.
75	2930.
85	1088.



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CANDELA DISTRIBUTION

0.0	5093
5.0	4843
10.0	4129
15.0	3175
20.0	2202
25.0	1201
30.0	578
35.0	313
40.0	178
45.0	103
50.0	63
55.0	40
60.0	27
65.0	19
70.0	13
75.0	8
80.0	5
85.0	1
90.0	0
95.0	1
100.0	4
105.0	8
110.0	13
115.0	19
120.0	27
125.0	41
130.0	62
135.0	98
140.0	167
145.0	293
150.0	531
155.0	1117
160.0	2165
165.0	3173
170.0	4178
175.0	4962
180.0	5285



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	119
5- 10	321
10- 15	431
15- 20	440
20- 25	355
25- 30	214
30- 35	127
35- 40	80
40- 45	51
45- 50	33
50- 55	22
55- 60	15
60- 65	11
65- 70	8
70- 75	6
75- 80	3
80- 85	2
85- 90	0
90- 95	0
95-100	1
100-105	3
105-110	6
110-115	8
115-120	11
120-125	15
125-130	22
130-135	32
135-140	48
140-145	75
145-150	118
150-155	197
155-160	340
160-165	437
165-170	433
170-175	326
175-180	122

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	439
0- 20	1311
0- 30	1879
0- 40	2087
0- 50	2170
0- 60	2208
0- 70	2227
0- 80	2236
0- 90	2238
0-100	2239
0-110	2248
0-120	2267
0-130	2305
0-140	2385
0-150	2577
0-160	3115
0-170	3985
0-180	4434



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	84	84	84	69	69	69	57	57	57	50
1	100	97	94	92	93	90	88	86	77	75	74	65	64	63	54	53	53	48
2	94	89	84	80	87	83	79	75	71	69	66	61	59	58	51	50	49	45
3	88	81	76	71	82	76	71	67	66	63	60	57	55	53	49	48	46	43
4	83	75	69	64	77	70	65	61	62	58	55	54	51	49	47	45	44	40
5	78	69	63	58	73	65	60	56	58	54	51	51	48	46	45	43	41	38
6	74	64	58	53	69	61	55	51	54	50	47	48	45	43	43	41	39	37
7	70	60	54	49	65	57	52	48	51	47	44	46	43	41	41	39	37	35
8	66	56	50	46	62	54	48	44	48	44	41	44	41	38	39	37	35	33
9	63	53	47	43	59	51	45	42	46	42	39	42	39	36	37	35	34	32
10	60	50	44	40	56	48	43	39	44	40	37	40	37	35	36	34	32	31

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.



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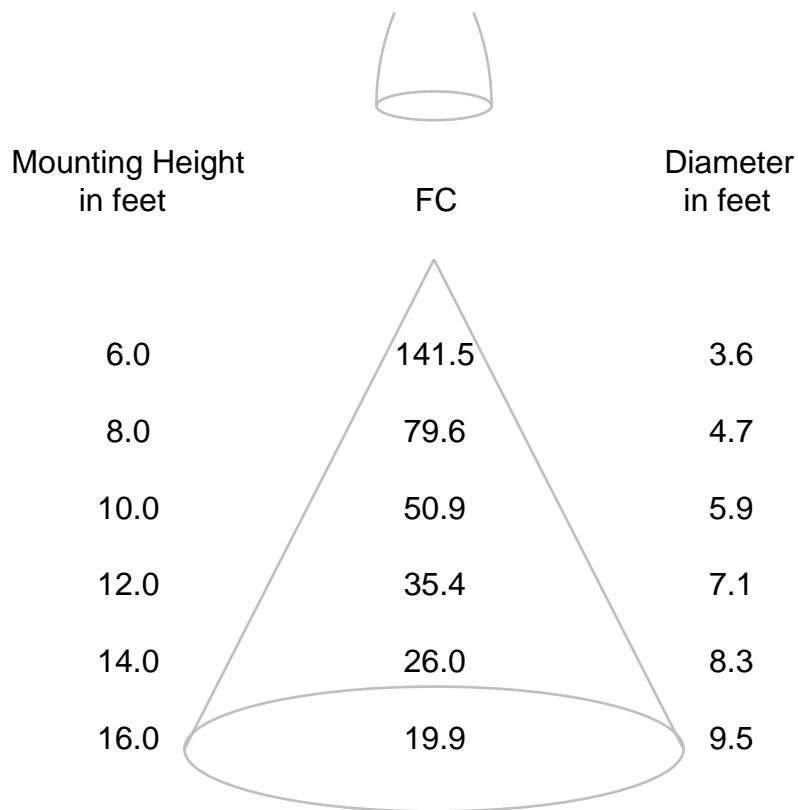
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CONE OF LIGHT DIAGRAM

(diameter shown is where fc value is half the fc at nadir)





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